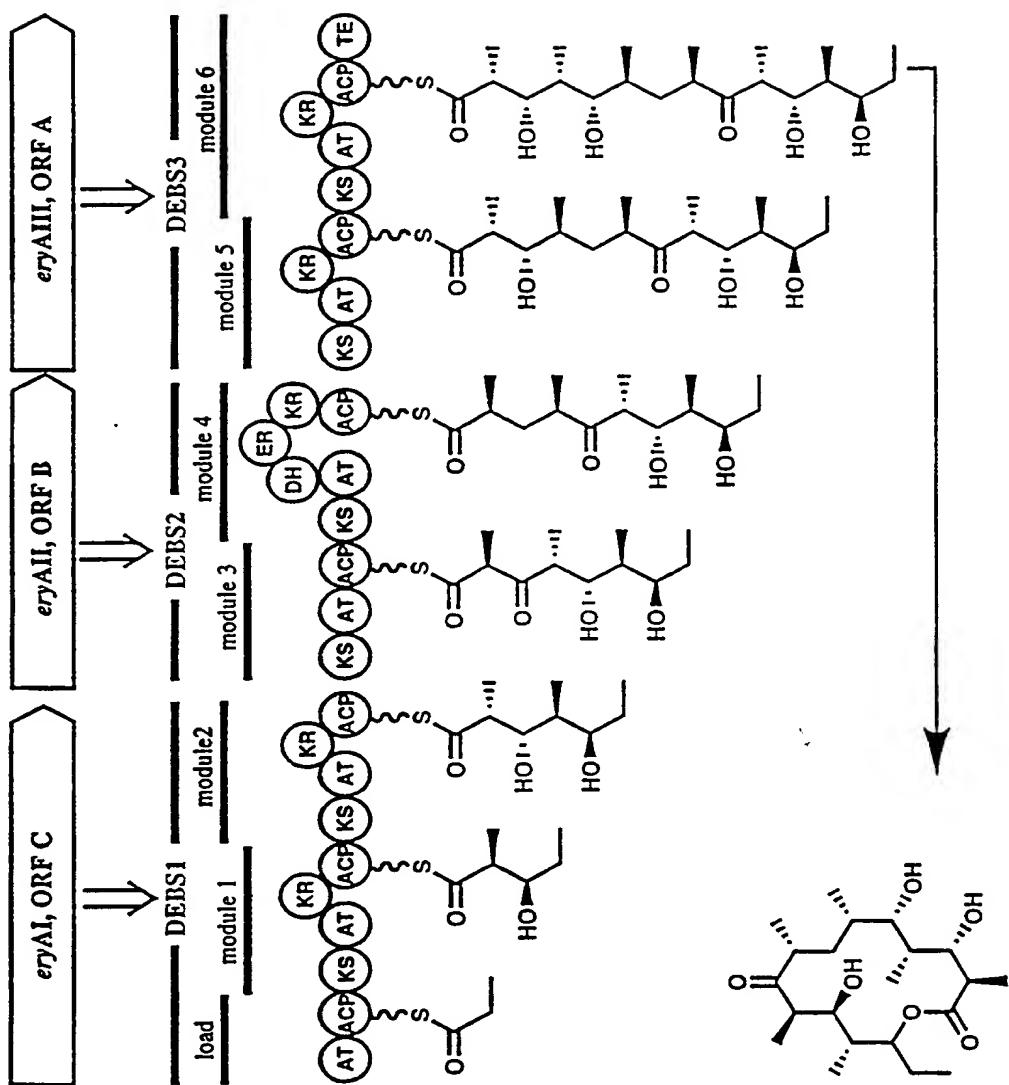


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The erythromycin PKS



1
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KCLFDAU	-----MVTGLGIVAPNGLGVGAIWDAVLNGRNGIGPLR
KCLFPEU	-----MTGTAARTASSQLHASPAGRRGLRGRAVVTGLGIVAPNGLGVGAYWDAVLNGRNGIGPLR
KCLFACT	-----MSVLITGVGVVAPNGLGLAPYWSAVLDGRHGLGPVT
KCLFHIR	-----MSTWWTGMGVVAPNGLGADDWAAATLKGRHGIISRLS
KCLFGRA	-----MSTPDRRRAAVTGLSVAAPGGLGTERYWKSLLTGENGIAELS
KCLFN0G	-----MTAAAVVTGLGVVAPTGLGVREHWSSTVRGASAIGPVT
KCLFTCM	-----MSAPAPVVVTGLGIVAPNGTGTTEEYWAATLAGKSGIDVIQ
KCLFCIN	-----MTP-VAVTGMGLAAPNGLGRPTTGRPPWAPRASAAST
KCLFVNZ	-----MSASVVVTGLGVAAPNGLGREDFWASTLGGKSGIGPLT
KCLFWHIE	-----MSGPQRTGTGGGSRRAVVTGLGVLSPHGTGVEAHKAVADGTSLGIV
KSGRA	-----MTRRVVITGVGVRAVPGGSGTKEFWDLLTAGRTATRPI
KSHIR	-----MTRRVVITGVGVRAVPGGLGAKNFWELLTSGRATATRRI
KSACT	-----MKRRVVIITGVGVRAVPGGNGTRQFWELLTSGRATATRRI
KSCIN	-----MTQRRVAITGIEVLAAPGGLGKEFWQLLSEGRTATRGI
KSVNZ	-----MTARRVVIITGIEVLAAPGCTGSKAFWNLSEGRTATRGI
KSN0G	-----MKESINRRVVIITGIGIVAPDATGVKPFWDLITAGRTATRTIT
KSTCM	-----MTRHAEKRVVIITGIGIVAPGGAGTAAFWDLITAGRTATRTIS
KSDAU	-----MNRRVVIITGMVVAPGAIGIKSFWELLSGTTATRAIT
KSPEU	-----MNRRIVITGIGIVVAPGAVGKPFWELLSGTTATRAIS
KSWHI	-----MTRRRVAVTIGIGIVVAPGGIGTPQFWRLSEGRTATRRI
*: : * . *	
KCLFDAU	RFADDGRLGRLAGEVSDFVP-EDHLPKRLLVQTDPMTQMTALAAAEWALREAGCAPSS--
KCLFPEU	RFTGDGRLGRLAGEVSDFVP-EDHLPKRLLAQTDPMTQY-ALAAAEWALRESGCSPSS--
KCLFACT	RFDVSRYPATLAGQIDDFHA-PDHIPGRLLPOTDPSTRL-ALTAADWALQDAKADPES-L
KCLFHIR	RFDPTGYPAAELAGQVLDFA-TEHLPKRLLPOTDVSTRF-ALAAAAWALADAEVDPAE-L
KCLFGRA	RFDASRYPSSLAGQIDDFEA-SEHLPSSLLPOTDVSTRY-ALAAADWALADAGVGPESGL
KCLFN0G	RFDAGRYPSSLAGEVPGFVP-EDHLPSSLMPQTDHMTRL-ALVAADWAFQDAAVDPSK-L
KCLFTCM	RFDPHGYPVVGGEVLAFDA-AAHLPGRLLPOTDRMTQH-ALVAAEWAADAGLEPEK-Q
KCLFCIN	RFDPSGYPAQLAGEIPGFR-AEHLPGRLVPQTDRVTRL-SLAAADWALADAGVEVAA-F
KCLFVNZ	RFDPTGYPARLAGEVPGFAA-EEHLPSSLLPOTDRMTRL-ALVAADWALADAGVRPEE-Q
KCLFWHIE	REGCAHPLRVAAGEVHGFDA-AETVEDRFLVQTDRFTHF-ALSATQHALADARFGRADVD
KSGRA	FFDASPPRSRIAGEI-DFDAVAEGFSPREVRRMDRATQF-AVACTRDALADSGLDGTGA-L
KSHIR	FFDPTPNRSQIAAEC-DFDPPEHEGLSPREIRRMDRAAQF-AVVCTRDAVADSGLEFEQ-V
KSACT	FFDPSPYRSQVAAEA-DFDPVAEGFGPRELDRMDRASQF-AVACAREFAAASGLDPDT-L
KSCIN	FFDPAPFRSKVAAEA-DFCGLENLSPQEVRMDRAAQF-AVVTAR-AVEDSGAELAA-H
KSVNZ	FFDPTPFRSRVAAEI-DFDPPEAHGLSPQEIRRMDRAAQF-AVVAAR-AVADSGIDLAA-H
KSN0G	AFDPSPFRSRVAAEC-DFDPLAEGLTPQQIRRMDRATQF-AVVSARESLEDSGLDLGA-L
KSTCM	LFDAAPYRSRIAGEI-DFDPPIGEGLSPRQASTYDRATQL-AVVCAREALKDSGLDPAA-V
KSDAU	TFDATPFRSRVAAEC-DFDPVAAGLSAEQARRLDragQF-ALVAGQEAUTDGLRIGE-D
KSPEU	TFDATPFRSRVAAEC-DFDPVAAGLSAEQARRLDragQF-ALVAGQEAULADGLRIDE-D
KSWHI	LFDPGRLRSQIAAEC-DFEPSDHGLGLATAQRCDRYVQF-ALVAASEAVRDANLDMNR-E
*: : * . :	

Fig 2A

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PCT/GB99/02042

KCLFDAU - PLEAGVITASASGGFASGQRELQNLWSKG-----PAHVSAYMSFAWFY-AVNTGQIAIR
 KCLFPEU - PLEAGVITASASGGFASGQRELQNLWSKG-----PAHVSAYMSFAWFY-AVNTGQIAIR
 KCLFACT TDYDMGVVTANACGGFDFTREFRKLWSEG-----PKSVSVYESFAWFY-AVNTGQISIR
 KCLFHIR PEYGTGVITSNATGGFEGFTHREFRKLWAQG-----PEFVSVYESFAWFY-AVNTGQISIR
 KCLFGRA DDYDLGVVTSTAQGGFDFTREFRKLWSQG-----PAYVSVYESFAWFY-AVNTGQISIR
 KCLFNOG PEYGVGVVTASSAGGFEGFIRELQNLWSLG-----PQYVSAYQSFAWFY-AVNTGQVSIR
 KCLFTCM DEYGLGVLTAAAGAGGFEGFQREMQKLWGTG-----PERVSAYQSFAWFY-AVNTGQISIR
 KCLFCIN DPLDMGVVTASHAGGFEGFQDELQKLLQG-----QPVLSAYQSFAWFY-AVNSGQISIR
 KCLFVNZ DDFDMGVVTASASGGFEGFQGELQKLWSQG-----SQYVSAYQSFAWFY-AVNSGQISIR
 KCLFWHIE SPYSGVVTAAAGSGGGFEGFQRELQNLWGHG-----SRHVGPYQSIAWFY-AASTGQVSIR
 KSGRA DPSRIGVALGSAVASATSLNEYLVMSDSGREWLVDPAHLSMMFDYLSPGVMPAEVAWA
 KSHIR PPERIGVSLGSAVAAAATSLQEYVLSDGGREWQVDPAYLSAHMFDYLSPGVMPAEVAWT
 KSACT DPARVGVSLGSAVAAAATSLEREYLLLSDSGRDWEVDAAWLSRHMFDYLVPSSFAEVWA
 KSCIN PPHRIGVVVGSAVGATMGLDNEYRVVSDGGRLDLVDHRYAVPHLYNLYLPSSFAEVWA
 KSVNZ DPYRVGTVGSAVGATMGLDEEYRVVSDGGRLDLVDHAYAVPHLYDYMVPSSFAEVWA
 KSNOG DASRTGVVVGSAVGCTTSLEEEYAVVSDSGRNWLVDGYAVPHLFDYFVPPSIIAEVAHD
 KSTCM NPERIGVSIIGTAVGCTIGLDREYARVSEGGSRWLVDHTLAVEQLFDYFVPTSICREVAWE
 KSDAU SAHRVGVCVGTAVGCTQKLESEYVALSAGGAWVWDPHRGAPELYDYFVPPSSLAAEVAWL
 KSPEU SAHRVGVCVGTAVGCTQKLESEYVALSAGGAHWVWDPGRGSPELYDYFVPPSSLAAEVAWL
 KSWHI DPWRAGATLGTAVGGTIRLEHDYVLVSEGRSLWDVDDRRSEPHLERAFTPATLSSAVAEE

* * * * *

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KCLFDAU - HDLRGPVGVVVAEQAGGLDALAHAR-RKVRGGAE-LIVSGAMDSSLCP-YGMAAQVRSG
 KCLFPEU - HDLRGPVGVVVAEQAGGLDALAHAR-RKVRGGAE-LIVSGAVDSSLCP-YGMAAQVKSG
 KCLFACT - HGMRGPSALVAEQAGGLDALGHAR-RTIRRGTP-LVSGGVDSALDP-WGWVSQLIASG
 KCLFHIR - HGLRGPGSVLVAEQAGGLDAVGHG-----AVRNGTP-MVVTGGVDSSFDP-WGWVSHVSSG
 KCLFGRA - NTMRGPSAALVGEQAGGLDAIGHAR-RTVRRGPG-WCSAVASTRRSTR-GASSSQLSGG
 KCLFNOG - HGLRGPGGVLTIEQAGGLDALQAR-RQLRRGLP-MVVAQAVDGSPCP-WGWVAQLSSG
 KCLFTCM - HGMRGHSSVFITEQAGGLAAAHA-RLLRKGTINTALTGGCEASLCP-WGLVAQIPSG
 KCLFCIN - HGMKGPSPGVVSDQAGGLDALAQR-RLVRKGTP-LIVCGAVEPRSPAGSPSSPAGG
 KCLFVNZ - NGMKGPSPGVVSDQAGGLDAVAQAR-RQIRKGTR-LIVSCGVDAISLCP-WGWVAHVASD
 KCLFWHIE - NDFKGPCCGVVAADEAGGLDALAHAA-LAVRNGTD-TVCGATEAPLAP-YSTVCQLGYP
 KSGRA - AGAEGPVTMVSDGCTSGLDSVGYAV-QGTREGSADVVVAGAADTPVSPIVVACFDAIKA
 KSHIR - VGAEGPVAMVSDGCTSGLDSLSHAC-SLIAEGTTDVMVAGAADTPITPIVVCFDAIKA
 KSACT - VGAEGPVTMVSTGCTSGLDSVGNM-RAIEEGSADVMFAGAADTPITPIVVCFDAIKA
 KSCIN - VGAEGPSTVVSTGCTSGLDSVGNM-ELVREGSVDVMVAGAVDAPISPIP-CVLDIKA
 KSVNZ - VGAEGPNTVVSTGCTSGLDSVGYARGELIREGSADVMIAGSSDAPISPIPITMACFDAIKA
 KSNOG - RIGAEGPVSLVSTGCTSGLDAVGRAA-DLIAEGAADVMLAGATEAPISPITVACFDAIKA
 KSTCM - AGAEGPVTVVSTGCTSGLDAVGYGT-ELIRDGRADVVVCGATDAPISPIPITVACFDAIKA
 KSDAU - AGAEGPVNIVSAGCTSGIDSIGYAC-ELIREGTVDVMLAGGVDAPIAPITVACFDAIRV
 KSPEU - AGAEGPVNIVSAGCTSGIDSIGYAC-ELIREGTVDAMVAGGVDAPIAPITVACFDAIRV
 KSWHI - FGVRGPVQTVSTGCTSGLDAVGYAY-HAVAEGRVDVCLAGAADSPISPIPITMACFDAIKA

* * * * *

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KCLFDAU RLSGSDDPTAGYLPPDERRAAGHVPGEG-GAILAVEDAERVAERG-GKVYGSIAGT-ASFD
 KCLFPEU RLSGSDDPTAGYLPPDERRAAGHVPGEG-GAILIVEDAERAERG-AKVYGSIAGYGASFD
 KCLFACT RISTATDPDRAYLPFDERAAGYVPGEG-GAILVLEDAAAERGRHDAYGELAGCASTFD
 KCLFHIR RVSRATDPGRAYLPFDVAANGYVPGEG-GAILLLEDAESAKARG-ATGYGEIAGYAATFD
 KCLFGRA LVSTVADPERAYLPFDASGYVPGEG-GAVLIVEDADSARARG---AERIYVRSPLRRD
 KCLFNOG GLSTSDDPDRAYLPFDAAAGGHVPGEG-GALLVLESDESARARGVTRWYGRIDGYAATFD
 KCLFTCM FLSEATDPHDAYLPFDARAAGYVPGEG-GAMLVAERADSARERDAATVYGRAGHASTFD
 KCLFCIN -MSDSDEPNRAYLPFDRDGRGYVPGGGRGVPPPLERAEEAPARG-AEVYGE-AGPLARL-
 KCLFVNZ RLSTSEEPARGYLPPDREAQGHVPGEG-GAILVMEAAAERERG-ARIYGEIAGYGSTFD
 KCLFWHIE ELSRATEPDRAYRPFTEAACGFAPAEG-GAVLVVEEEAARERG-ADVRATVAGHAATFT

Fig 2B

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KSGRA	TTPRNDDPAHASRPFDGTRNGFVLAEG-AAMFVLEEEYAAQRRG-AHIYAEVGGYATRSQ
KSHIR	TTPRNDDPEHASRPFDNSRNGFVLAEG-AALFVLEELEHARARG-AHVYAEISGCATRLN
KSACT	TTARNDPEHASRPFDGTRDFVLAEG-AAMFVLEDYDSALARG-ARIHAEISGYATRCN
KSCIN	TPRHDAPATASRPFDSTRNGFVLGEG-AAVFVLEELHSARRG-AHIYAEIAGYATRSN
KSVNZ	TTNRYDDPAHASRPFDGTRNGFVLGEG-AAVFVLEELESARARG-AHIYAEIAGYATRSN
KSONG	TPPRNDTPAEASRPFDTRNGFVLGEG-AAVFVLEEFEHARRG-ALVYAEIAGFATRCN
KSTCM	TSANNDPAHASRPFDNRDGFVLGEG-SAVFVLEELSAARRG-AHAYAEVRGFATRSN
KSDAU	TSDHNDTPETLA-PFSRSRNGFVLGEG-GAIIVVLEEEAAVRRG-ARIYAEIGGYASRGN
KSPEU	TSDHNDTPETASRPFSRSRNGFVLGEG-GAIIVVLEEEAAVRRG-ARIYAEIGGYASRGN
KSWHI	TSPNNDPAHASRPFDADRGFVMGEG-AAVLVLEDLEHARARG-ADVYCEVSGYATFGN
* * *	
KCLFDAU	-PPPGSGRP---SALARAVETALADAGLDRSDIAUVFADGAA-VGELDVAEAEALASVFG
KCLFPEU	-PPPGSGRP---SALARAVETALADAGLDGSIDIAUVFADGAA-VPELDAAEAEALASVFG
KCLFACT	-PAPGSGRP---AGLERAIRLALNDAGTGPEDVUVFADGAG-VPELDAAEARAIGRFG
KCLFHIR	-PAPGSERP---PALRRAIELALADELRPEDQVUVFADGAG-VAELDAIEAAAIRELFG
KCLFGRA	-PAPGSGRP---PALGRAELALAEAGLTPADISUVFADGAG-VPELDRAEADTLARLFG
KCLFNOG	-PPPGSGRP---PNLLRAAQALDDAEVGPEAVDUVFADASG-TPDEDEAAEADAVRRLFG
KCLFTCM	-ARPCTGRP---TGPARAIRLALEARVAPEDUVVYADAAG-VPALDRAEAEALAEVFG
KCLFCIN	-PAPHSGRG---STRAHAI RTALDDAGTAPGDIRRVFADGGGRYPN-DRAEAEAI SEVFG
KCLFVNZ	-PRPGSGRE---PGLRKAI ELALADAGAAPGIDUVFADAAA-VPELDRVEAEALNAVFG
KCLFWHIE	GAGRWAESR---EGLARAI QGALAEAGCRPEEVUVFADALG-VPEADRAEALALADALG
KSGRA	-AYHMTGLKKDGREMAESTRALDEARLDRTAVDYVNAHGSG-TKQNDRHETAAFKRSLG
KSHIR	-AYHMTGLKTDGREMAEAI VALDLARIDPTIDYINAHGSG-TKQNDRHETAAFKRSLG
KSACT	-AYHMTGLKADGREMAETIRVALDESRTDATDIDYINAHGSG-TRQNDRHETAAKRALG
KSCIN	-AYHMTGLR-DGAEMAEAIRLALDEARLNPEQVDYINAHGSG-TKQNDRHETAAFKKALG
KSVNZ	-AYHMTGLRPDGAEMAEAIRVALDEARMNPEIDYINAHGSG-TKQNDRHETAAFKKSILG
KSONG	-AFHMTGLRPDGREMAEAI GVALAQAGKAPADVDYVNAHGSG-TRQNDRHETAAFKRSLG
KSTCM	-AFHMTGLKPDGREMAEAI TAALDQARRTGDDLHYINAHGSG-TRQNDRHETAAFKRSLG
KSDAU	-AYHMTGLRADGAEMAIAITAALDEARRDPSDVUVNAHGTA-TRQNDRHETS AFKRSLG
KSPEU	-AYHMTGLRADGAEMAIAITAALDEARRDPSDVUVNAHGTA-TKQNDRHETS AFKRSLG
KSWHI	-AYHMTGLTKEGLEMARAI TALDMAELDGS AIDYVNAHGSG-TQQNDRHETAAV KRSLG
: : * : : : *	

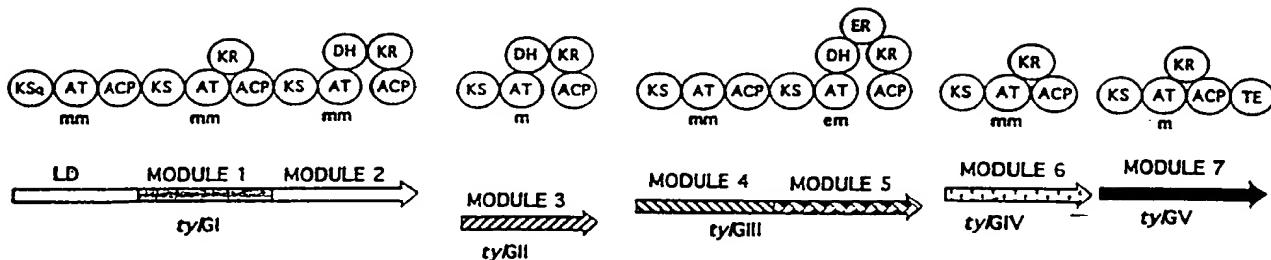
Fig 2C

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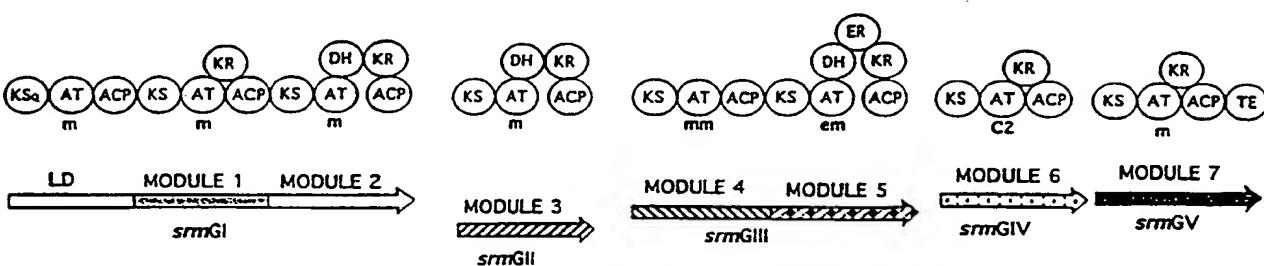
mole:-/ks2%

Fig 2D

ORGANISATION OF THE TYLOSIN-PRODUCING POLYKETIDE SYNTHASE



ORGANISATION OF THE SPIRAMYCIN-PRODUCING POLYKETIDE SYNTHASE



ORGANISATION OF THE NIDDAMYCIN-PRODUCING POLYKETIDE SYNTHASE

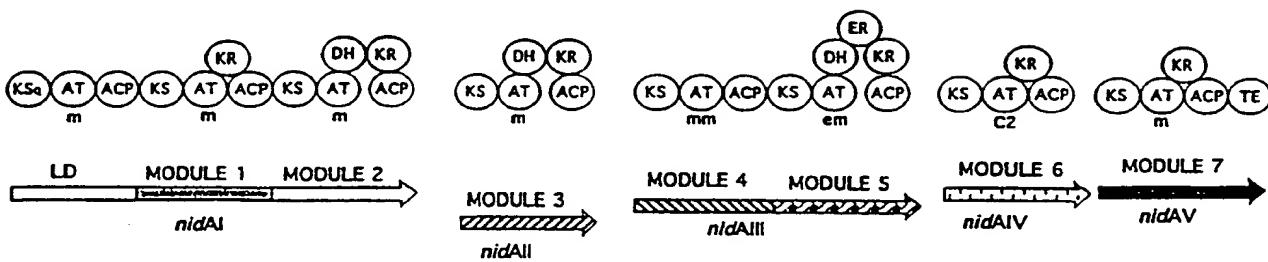


Fig 3

m: malonyl transferase
 mm: methylmalonyl transferase
 em: ethylmalonyl transferase
 C2: unknown C2 unit transferase

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Fig. 4A

niddamycin	1	MAGHGDATAQ KAQDAEKSED GSDAIAVIGM	50
platenolide		MS GELAISRSDD RSDAVAVVGM	
monensin		MAAS ASASPSGPSA GPDPIAVVGM	
oleandomycin		MHVPGEE NGHSIAIVGI	
tylosin		MSSALRRAVQ SNCGYGDLMT SNTAAQNTGD QEDVDGPDST HGGEIAVVGM	
niddam...	51	SCRFPGAPGT AEFWQLLSSG ADAVVTAAADG RRR.....	100
platenol.		ACRFPGAPGI AEFWKLLTDG RDAIGRDADG RRR.....	GMIEA
monensin		ACRLPGAPDP DAFWRLLSEG RSAVSTAPPE RRRADSGLHG P...GGYLDR	
oleandom		ACRLPGSATP QEFWRLLADS ADALDEPPAG RFPTGSLSSP PAPRGGFLLDS	
tylosin		SCRLPGAAAGV EEFWELLRSG RGMPTRQDDG TWRAA.....	LED
niddam...	101	PADFDAAFFG MSPREAAATD PQQRLVLELG WEALEDAGIV PESLRGEAAS	150
platenol.		PGDFDAAFFG MSPREAAETD PQQRLMLELG WEALEDAGIV PGSLRGEAVG	
monensin		IDGFDADFFH ISPREAVAMD PQQRLLELS WEALEDAGIR PPTLARSRTG	
oleandom		IDTFDADFFN ISPREAGVLD PQQRLALELG WEALEDAGIV PRHRLGTRTS	
tylosin		HAGFDAGFFG MNARQAAATD PQHRLMLELG WEALEDAGIV PGDLTGTDTG	
niddam...	151	VFVGAMNDY ATLLH.RAGA PTDTYTATGL QHSMIANRLS YFLGLRGPSL	200
platenol.		VFVGAMHDDY ATLLH.RAGA PVGPHTATGL QRAMLANRLS YVLGTRGPSL	
monensin		VFVGAFWDDY TDVNLNRAPG AVTRHTMTGV HRSILANRIS YAYHLAGPSL	
oleandom		VFMGAMWDDY AHLAHARGEA ALTRHSLTGT HRGMIANRLS YALGLQGPSL	
tylosin		VFAGVASDDY A.VLTRRSAV SAGGYTATGL HRALAANRLS HFLGLRGPSL	
niddam...	201	VVDTGQSSSL VAVALAVESL RGRTSGIALA GGVNLVLAEE GS.AAMERVG	250
platenol.		AVDTAQSSSL VAVALAVESL RAGTSRAVA GGVNLVLADE GT.AAMERLG	
monensin		TVDTAQSSSL VAVHLACESI RSGDSDIAFA GGVNLICSPR TTELAAARFG	
oleandom		TVDTGQSSSL AAVHMACESL ARGESDLALV GGVNLVLDPA GT.TGVERFG	
tylosin		VVDSAQSASL VAVQLACESL RRGETSLAVA GGVNLILTEE ST.TVMERMG	
niddam...	251	ALSPDGRCHT FDARANGYVR GEGGAIIVVLK PLADALADGD RVYCVVRGVA	300
platenol.		ALSPDGRCHT FDARANGYVR GEGGAAVVLK PLADALADGD PVYCVVRGVA	
monensin		GLSAAGRCHT FDARADGFVR GEGGLVVLK PLAAARRDGD TVYCVIRGSA	
oleandom		ALSPDGRCYT FDSRANGYAR GEGGVVVVLK PTHRALADGD TVYCEILGSA	
tylosin		ALSPDGRCHT FDARANGYVR GEGGGAAVVLK PLDAALADGD RVYCVIKGGA	
niddam...	301	TGNDGGGPGL TVPDRAQGQEA VLRAACDQAG VRPADVRFVE LHGTGTPAGD	350
platenol.		VGNDGGGPGL TAPDREGQEA VLRAACAQAR VDPAEVRFVE LHGTGTPVGD	
monensin		VNSDGTTDGI TLPSGQAQQD VVRLACRRAR ITPDQVQYVE LHGTGTPVGD	
oleandom		LNNDGATEGL TVPSARAQAD VLHQAWERAR VAPTDVQYVE LHGTGTPAGD	
tylosin		VNNDGGGASL TTPDREAQEA VLHQAYRRAG VSTGAVRYVE LHGTGTRAGD	

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Fig 4B

800

niddam...	HG.GAMLSVQ AAEHDLDQLA HTHG..VEIA AVNGPTHCVL SGPRTALEET
platenol.	VG.GGMWSVG ASESVVRGVV EGLGEWSVA AVNGPRSVVL SGDVGVL
monensin	AP.GAMAAWQ ATADEAAEQL AGHERHVTVA AVNGPDSVVV SGDRATVDEL
oleandom	GG.GVMLSVQ APESEVAPLL LGREAHVGLA AVNGPDAVVV SGERGHVAAI
tylosin	AGRGAAMAAPP LPAGEVEAGL AKWPGVEVA AVNGPASTVV SGDRRAVAGY

801

850

niddam...	AQHLREQNVR HTWLKVSHAF HSALMDPMLG AFRDTLNTLN Y..QPPTIPL
platenol.	VASLMGDGVE YRRLDVSHGF HSVLMEPVLG EFRGVVESLE FGRVRPGVVV
monensin	TAAWRGRGRK AHHLKVSHAF HSPHMDPILD ELRAVAAGLT FHE..PVIPV
oleandom	EQILRDRGRK SRYLRVSHAF HSPLMEPVLE EFAEAVAGLT FRA..PTTPL
tylosin	VAVCQAEGVQ ARЛИPVDYAS HSRHVEDLKG ELERVLSGI. RPRSPRVPV

851

900

niddam...	ISNLTGQIA.DPNHL CTPDYWIDHA RHTVRFADAV QTAHHQGTTT
platenol.	VSGVSGGVV.GSGEL GDPGYWVRHA REAVRFADGV GVVRLGVGT
monensin	VSNVTGELVT ATATGSGAGQ ADPEYWARHA REPVRFLSGV RGLCERGVTT
oleandom	VSNLTG....APVDDRTM ATPAYWWRHV REAVRGDG1 RALGKLTGS
tylosin	CSTVAGEQPG EPVF.....DAGYWFRNL RNRVEFSAVV GGLLEEGHRR

901

950

niddam...	YLEIGPHPTL TTLLHHTL..DNP.....T TIPTLHRERP
platenol.	LVEVGP亨GVL TGMAEGCLGA GDDV.....V VVPAMRRGRA
monensin	FVELGPDAPL SAMARDCFPA P.....ADRSRPRPA AIATCRRGRD
oleandom	FLEVGP亨GVL TAMARACVTA APEPGHRGEQ GADADAHTAL LLPALRRGRD
tylosin	FIEVSAHPVL V.....HAIEQ TAAEADRSVH ATGTLRRQDD

951

niddam...	EPETLTQAI A AVGVRTDGID WAVLCGASRP RRVELPTYAF
platenol.	EREVFEAALA TVFTRDAGLD ATALHTGSTG RRIDLPTTPF
monensin	EVATFLRSLA QAYVRGADVD FTRAYGATAT RRFPLPTYPF
oleandom	EARSLTEAVA RLHLHGVPMD WTSVLGGDVS RVPLPTYAF
tylosin	SPHRLLTSTA EAWAHGATLT WDPAL..PPG HLTTLPTYPF

niddam: niddamycin; platenol: platenolide I (spiramycin); oleandom: oleandomycin.

FIG. 4C

09/720841

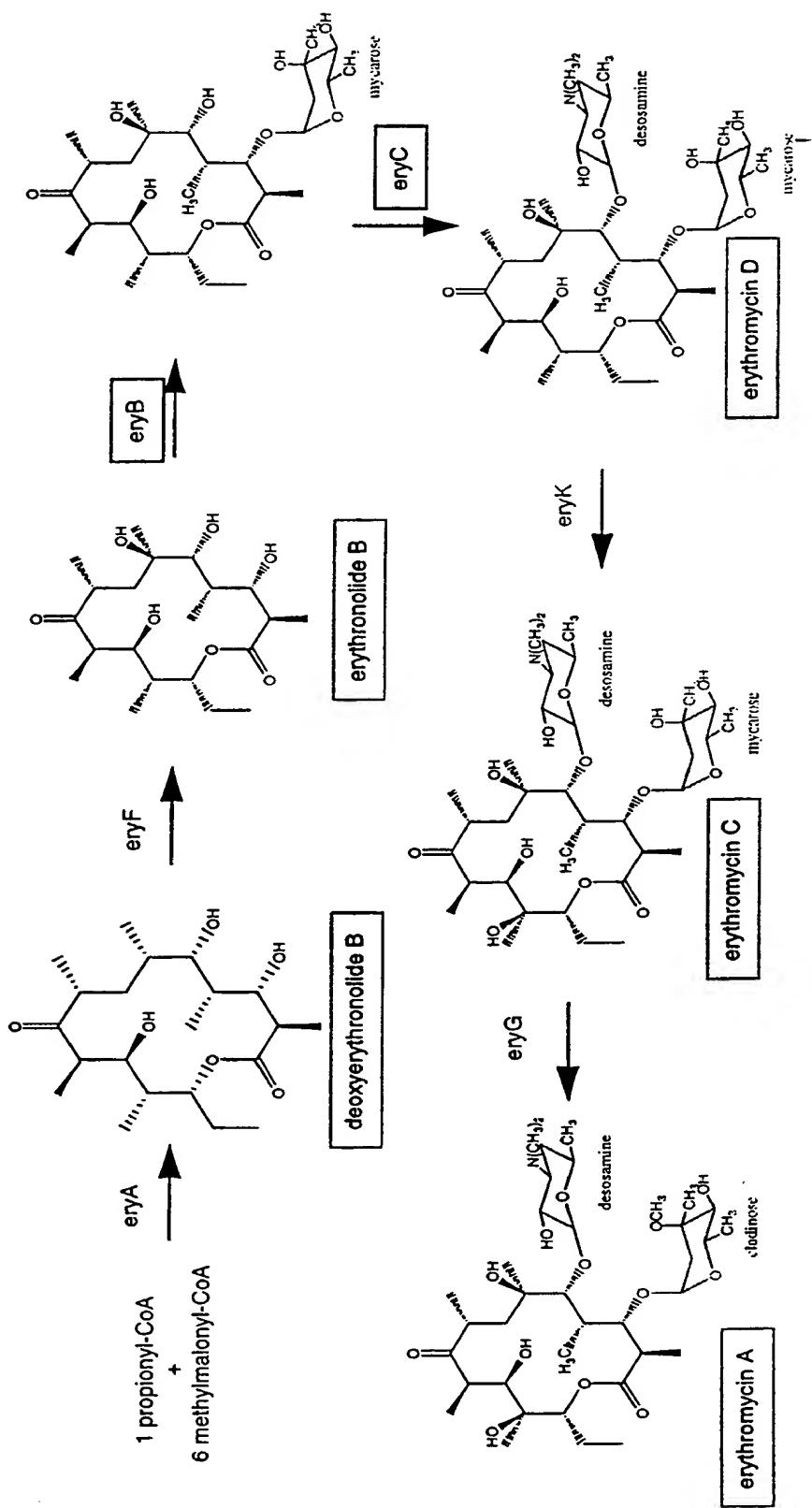


Fig. 5

09/72084

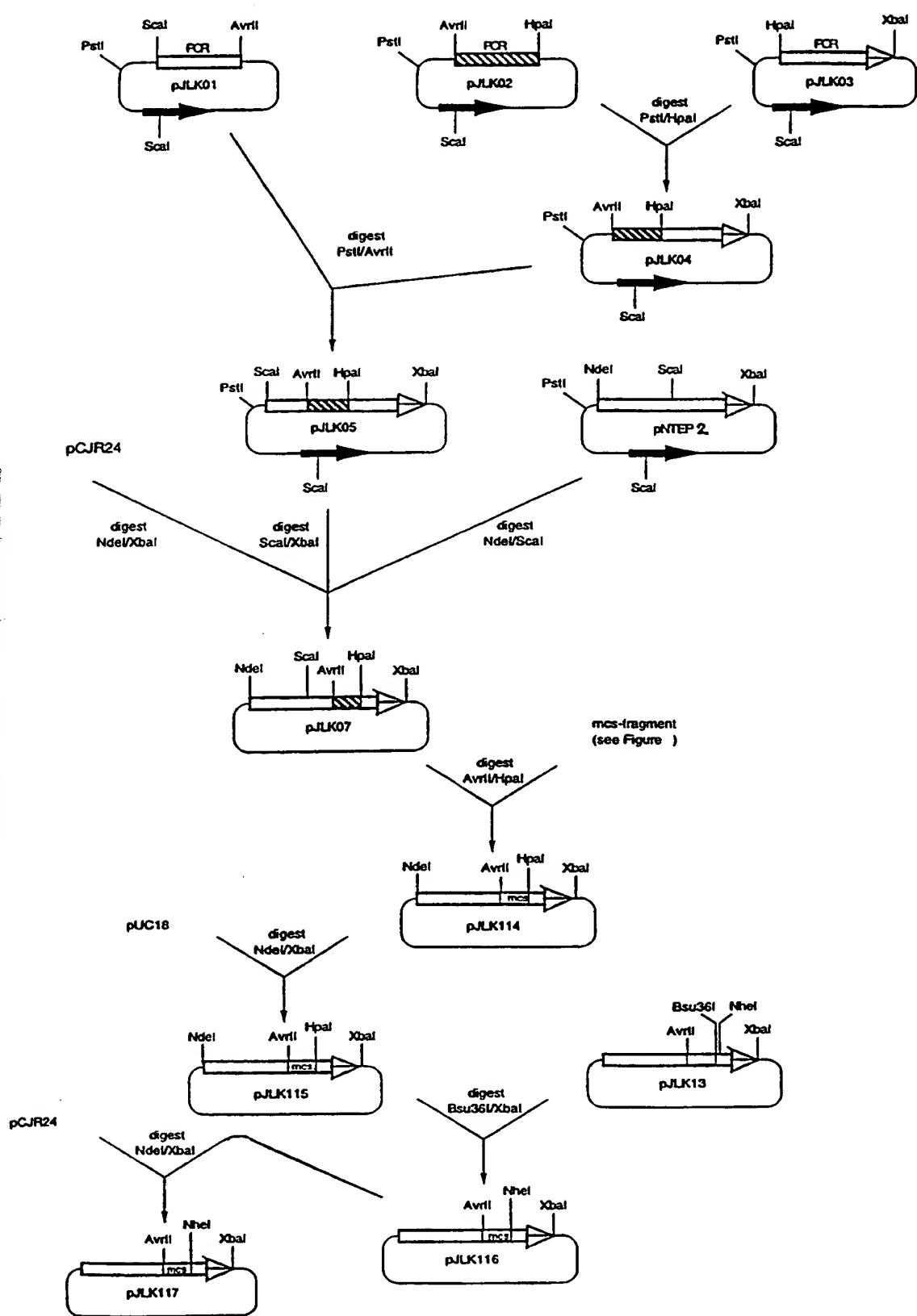


Fig 6

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7

forward (Plf):

5' -CTA GGC CGG GCC GGA CTG GTA GAT CTG CCT ACG TAT CCT TTC CAG GGC AAG CGG TTG CAG CCC GAC CGC ACT AGT CCT CGT GAC GAG
GGA GAT GCA TCG AGC CTG AGG GAC CGG TT-3'

backward (P1b):

GGC AGA TCT ACC AGT CCG GCC CGG C-3'.

oligos annealed: